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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/627,254	07/28/2000	Daniel W. Farrow	DP-301565	2386

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EXAMINER	
APPIAH, CHARLES NANA	
ART UNIT	**PAPER NUMBER**
2686	12

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/627,254	FARROW ET AL.	
	Examiner	Art Unit	
	Charles Appiah	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 26 April 2004 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1- 4, 17, 18, 20-22, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bergins et al. (5,826,198)** in view of **Iwamoto (6,366,787)** and further in view of **Tsai et al. (6,128,372).**

Regarding claim 1, Bergins discloses a radio system for sending and receiving electronic messages from a data terminal equipment (DTE 30) through a cellular telephone (transceiver 40), the radio having a microprocessor (34, 36, 42), a display (22) and a connector (34, 38) for connecting to the DTE, the system comprising: a modem (36) incorporated into the radio and having means (32, 34) for connecting to the DTE, a communication port (34, 38) having access to the modem and the cellular telephone, the communication port having a controller (34) for communicating transmission signals to the radio including signals having information about the status of

a communication connection between the DTE and the cellular telephone (see col. 4, lines 31-44), and software for the controller including both instructions for determining the status of the communication connection (see col. 4, lines 45-67, col. 6, lines 13-33). Bergins fails to teach that the DTE is a personal digital assistant (PDA).

Iwamoto discloses a digital cellular telephone, which is connected to an information processing apparatus such as PDA for the transmission and reception of signals between the digital cellular telephone and the information processing apparatus (see Fig. 1, col. 10, lines 31-59). According to Iwamoto, the control unit of the digital cellular in response to receiving instruction from the digital data communication processing unit controls the radio communication unit for issuing a call for line request while controlling the switching unit for connection between the digital data communication processing unit and the radio communication unit (see col. 2, lines 25-57, col. 15, line 47 to col. 16, line 27).

It would therefore have been obvious to one of ordinary skill in the art to use the PDA of Iwamoto as the DTE in Bergins' communication system for the benefit of providing the advantages of using a PDA for data communication such as easy exchange, storage and access to data.

The combination of Bergins and Iwamoto fails to teach software and instructions for displaying the status of the communication connection between the personal digital assistant and the cellular phone on the display of the radio.

Tsai discloses an extension device, which includes a data exchange unit and communicates directly with a common digital telephone, an electronic note card (similar

to a PDA) and a display for showing information (see abstract, Fig. 2). According to Tsai shows and as illustrated in Figs. 3A to 3E, when the digital telephone is correctly connected to an electric note card via the data exchange with the digital phone detecting the electric note card and displaying the correctly mounting of the electric note card to the digital phone (see col. 3, line 66 to col. 4, line 30). Tsai shows the advantages of having the extension device for working with a digital telephone include easy text input capability, application to a common digital telephone instead of a specific telephone exchange apparatus, easy to carry and communication with compatible telephones capability (see col. 6, lines 24-45).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Tsai by incorporating the feature of an extension device capable of working with a telephone with the system of Bergins and Iwamato for the benefit of having a versatile communication system capable of easily communicating with any compatible digital telephone for exchanging data, storage and editing as well enhance the efficiency and convenience of telephone operation as taught by Tsai.

Regarding claims 2 and 3, the combination of Bergins, Iwamoto and Tsai shows the use of AT commands that include the use of AT commands that are decoded and acted upon by the radio wherein the AT commands comprise a dial command as inherently taught by Bergins (see col. 5, line 65 to col. 6, line 8), hang-up command, and an extended results code command (see Iwamoto, col. 11, line 11 to col. 12, line 29).

Regarding claim 4, Bergins further shows the communication port disables predetermined functions of the radio during communications between the phone and the

personal digital assistant so as not to interfere with the data transmission (see col. 12, lines 20-50).

Regarding claims 17, 18, 20 and 21, Bergins discloses a method and a radio system for sending and receiving electronic messages from a data terminal equipment (DTE 30) through a cellular telephone (transceiver 40), the radio having a modem (36), a display (22) and a communication port (34, 38), the method comprising the steps of: connecting the DTE to a modem connection of modem 36 through line 35 to protocol and control processor 36 and also through interface 38 to analog processor 44, col. 4, lines 55-67), utilizing the communication port as a communication link between the modem and cellular telephone (see col. 4, line 59 to col. 5, line 6), and determining the status of a communication connection between the DTE and the cellular telephone through the modem (see col. 6, lines 13-62) ,wherein the step of utilizing includes a step of connecting the cellular phone to the communication port (see col. 4, lines 31-44). Bergins fails to explicitly teach that the DTE is a personal digital assistant (PDA).

Iwamoto discloses a digital cellular telephone, which is connected to an information processing apparatus such as PDA for the transmission and reception of signals between the digital cellular telephone and the information processing apparatus (see Fig. 1, col. 10, lines 31-59).

It would therefore have been obvious to one of ordinary skill in the art to use the PDA of Iwamoto as the DTE in Bergins' communication system for the benefit of providing the advantages of using a PDA for data communication while maximizing cost

savings through providing data transmission only when the displayed status of the connection ensures good quality communications.

The combination of Bergins and Iwamoto fails to teach software and instructions for displaying the status of the communication connection between the personal digital assistant and the cellular phone on the display of the radio.

Tsai discloses an extension device, which includes a data exchange unit and communicates directly with a common digital telephone, an electronic note card (similar to a PDA) and a display for showing information (see abstract, Fig. 2). According to Tsai shows and as illustrated in Figs. 3A to 3E, when the digital telephone is correctly connected to an electric note card via the data exchange with the digital phone detecting the electric note card and displaying the correctly mounting of the electric note card to the digital phone (see col. 3, line 66 to col. 4, line 30). Tsai shows the advantages of having the extension device for working with a digital telephone include easy text input capability, application to a common digital telephone instead of a specific telephone exchange apparatus, easy to carry and communication with compatible telephones capability (see col. 6, lines 24-45).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Tsai by incorporating the feature of an extension device capable of working with a telephone with the system of Bergins and Iwamato for the benefit of having a versatile communication system capable of easily communicating with any compatible digital telephone for exchanging data, storage and editing as well enhance the efficiency and convenience of telephone operation as taught by Tsai.

Regarding claims 22 and 23, the combination of Bergins, Iwamoto and Tsai shows the use of AT commands that include the use of AT commands that are decoded and acted upon by the radio wherein the AT commands comprise a dial command as taught inherently taught by Bergins (see col. 5, line 65 to col. 6, line 8), hang-up command, and an extended results code command (see Iwamoto, col. 11, line 11 to col. 12, line 29).

Regarding claim 24, Bergins further shows wherein the communication port disables predetermined functions of the radio during communications between the phone and the personal digital assistant so as not to interfere with the data transmission (see col. 12, lines 20-50).

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Bergins et al, Iwamoto and Tsai et al** as applied to claim 18 above, and further in view of **Pardo (6,266,539).**

Regarding claim 19, the combination of Bergins, Iwamoto and Tsai meets all limitations as applied above to claim 18.

The combination of Bergins and Iwamoto fail to explicitly teach monitoring for a loss of a connection or a hang up signal from the PDA and ending the audio connection upon loss of connection or receipt of the hang up signal.

Pardo discloses a docking arrangement in conjunction with a basic telephone circuit that exploits all of the resident intelligence of a PDA in conjunction with the telephone circuit (see col. 3, lines 6-62). According to Pardo and as illustrated in Fig. 1-3a, the docking station has the capability of being provided with an IR or RF data

exchange facility (see col. 5, line 7, lines 17-29) and also includes a modem to implement the exchange of digital information over the telephone line (see col. 5, lines 52-60), with the protocol between the PDA and the modem enabling the PDA to control the modem to get event signals and data from the modem using control commands such as dial, pick up, hang up, get line status, get data, col. 7, lines 49-67).

It would therefore have been obvious to one of ordinary skill in the art to combine the above teaching of Pardo with the system of Bergins, Iwamoto and Tsai in order to enable the exchange of control signals for implementing desired communications functions, such as terminating an audio channel connection, which exploits the intelligence of the PDA while requiring only basic and inexpensive hardware interface between the PDA and the user's telephone as taught by Pardo.

5. Claims 5-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bottoms et al** in view of **Jacobs** and further in view of **Pardo (6,266,539).**

Regarding claim 5, Bottoms discloses a radio (100) for sending and receiving electronic messages from a data terminal equipment (DTE 10) through a cellular phone (200), the radio having a microprocessor (125) and a connector (11) for connecting to the portable computer, the system comprising: a modem (135, 145) incorporated into the radio and having means for connecting the data terminal equipment (DTE port 115), a communication port (PSTN port 105) having access to the modem (149) and the cellular telephone (166), the communication port having a controller (125) for communicating transmission signals to the radio (see col. 4, lines 14-19), whereby the radio transmits information that monitors a communication connection for data

transmission between the data terminal equipment and the cellular telephone through the modem, and the communication port transmits information about the status of the connection to the radio (see col. 4, lines 19-56). See Figs. 1-3. , Bottoms further teaches a user having the capability of performing "keyboard" dialing from the DTE or by directly pressing the keys of a keypad associated with the telephone handset (see col. 4, lines 8-13), reading on the capability of sending a phone number from the PDA to the radio, sending the phone number from the radio to the cellular phone, dialing the phone number from the cellular phone. Bottoms teach the establishment of an audio channel connection between the phone and the modem (see col. 4, line 57 to col. 4, line 30). Bottoms thus read on the invention as claimed except the feature of the data terminal equipment being specifically a personal digital assistant.

Jacobs discloses a system for providing data communications between a dual mode radiotelephone and an electronic accessory such as a personal digital assistant (see Figs. 1-3). Jacobs shows the capability of providing data communications in two types of radiotelephone networks through a modem coupled to the PDA (see col. 1, lines 55-65, col. 3, lines 27-29), by enabling the electronic accessory to go from digital cellular radiotelephone system to an analog cellular telephone system without changing or reconfiguring the connections between the radiotelephone and the accessory (see col. 1, lines 51-53, col. 48-55).

It would therefore have been obvious to one of ordinary skill in the art to use a PDA in place of the data terminal equipment of Bottoms in order to provide the

advantage of data communications without having to change or reconfigure the connections between the cellular telephone and the PDA as taught by Jacobs.

The combination of Bottoms and Jacobs fail to explicitly teach monitoring for a loss of a connection or a hang up signal from the PDA and ending the audio connection upon loss of connection or receipt of the hang up signal.

Pardo discloses a docking arrangement in conjunction with a basic telephone circuit that exploits all of the resident intelligence of a PDA in conjunction with the telephone circuit (see col. 3, lines 6-62). According to Pardo and as illustrated in Fig. 1-3a, the docking station has the capability of being provided with an IR or RF data exchange facility (see col. 5, line 7, lines 17-29) and also includes a modem to implement the exchange of digital information over the telephone line (see col. 5, lines 52-60), with the protocol between the PDA and the modem enabling the PDA to control the modem to get event signals and data from the modem using control commands such as dial, pick up, hang up, get line status, get data, col. 7, lines 49-67).

It would therefore have been obvious to one of ordinary skill in the art to combine the above teaching of Pardo with the system of Bottoms and Jacobs in order to enable the exchange of control signals for implementing desired communications functions, such as terminating an audio channel connection, which exploits the intelligence of the PDA while requiring only basic and inexpensive hardware interface between the PDA and the user's telephone as taught by Pardo.

The combination of Bottoms, Jacobs and Pardo fails to teach displaying the status of the communication connection between the personal digital assistant and the cellular phone on the display of the radio.

Tsai discloses an extension device, which includes a data exchange unit and communicates directly with a common digital telephone, an electronic note card (similar to a PDA) and a display for showing information (see abstract, Fig. 2). According to Tsai shows and as illustrated in Figs. 3A to 3E, when the digital telephone is correctly connected to an electric note card via the data exchange with the digital phone detecting the electric note card and displaying the correctly mounting of the electric note card to the digital phone (see col. 3, line 66 to col. 4, line 30). Tsai shows the advantages of having the extension device for working with a digital telephone include easy text input capability, application to a common digital telephone instead of a specific telephone exchange apparatus, easy to carry and communication with compatible telephones capability (see col. 6, lines 24-45).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Tsai by incorporating the feature of an extension device capable of working with a telephone with the system of bottoms, Jacobs and Pardo for the benefit of having a versatile communication system capable of easily communicating with any compatible digital telephone for exchanging data, storage and editing as well enhance the efficiency and convenience of telephone operation as taught by Tsai.

Regarding claim 6, Bottoms further discloses the step of transmitting a phone number inherently further comprises the step of monitoring the connection between the PDA and the modem for a signal indicating data terminal ready by way of the radio including verifying the availability of the phone upon receipt of the data terminal ready signal (see col. 4, lines 8-13), and disabling all other radio functions by way of the communication port upon confirmation that the phone is available (see col. 4, lines 14-24), while Pardo teaches monitoring the personal PDA for receipt of the phone number to be dialed (feature of "get line status" col. 7, lines 49-67).

Regarding claim 7, the combination of Bottoms, Jacobs and Pardo as modified by Tsai inherently meet the step of monitoring the PDA for receipt of a phone number to be dialed further comprises the step of sending a signal to the communication port to terminate the audio channel connection after a predetermined period of time elapses without receipt of a phone number as taught by Pardo by the capability of the docking station to be operational when the power supply is disconnected (see col. 6, lines 32-56).

Regarding claim 8, Bottoms, further show the step of verifying the availability of the phone upon receipt of the data terminal ready signal including monitoring the PDA for a data terminal ready (feature of disabling voice encoder and voice decoder, col. 4, lines 14-23, from Bottom), while Pardo shows the capability of displaying on the telephone screen features such as dialing status, redialing status, receiving a call, caller log, etc., see Figs. 4-9), but the combination of Bottoms, Jacobs and Pardo as modified by Tsai fail to explicitly teach the steps of specifically displaying a message on the radio

indicating the phone is unavailable when the phone is unavailable, continuing to monitor the PDA for a data terminal ready signal and waiting a predetermined period of time before resuming the step of verifying the availability of the phone.

However, since Bottoms shows disabling the voice encoder and voice decoder in the "data-only-mode" and since Pardo shows the capability of displaying dialing messages, it would have been obvious to one of ordinary skill in the art to provide for the display of any desired messages including the availability or unavailability of the phone for carrying out desired communications without wasting communication resources unnecessarily.

Regarding claims 9 and 10, Bottoms shows control processor 240 signals the cellular transceiver to transmit and receive signals via lines 149 and 166 respectively during "voice-only-cellular mode" and "voice-only-PSTN mode" indicating the a determination that a computer connection does not exist (col. 3, lines 12-34), and terminating the audio channel connection by the disabling of the voice encoder and voice decoder, (see col. 4, lines 14-23), but the combination of Bottoms, Jacobs, Pardo and Tsai fail to specifically teach removing power from the modem in the absence of a data terminal ready signal or determining a computer connection does not exist, terminating the cellular phone call, and waiting for a predetermined period of time before resuming the method at the step of verifying the availability of the phone. However, since Bottoms discloses bypassing the modem during the voice-only-cellular mode it would have been obvious to one of ordinary skill in the art to ensure the removal of power to the modem in the absence of a data terminal ready signal as well as

terminating undesired communications such as terminating the cellular phone call, since this will ensure avoiding wasting communication resources such as power to the modem when not needed before resuming the step of verifying the availability of the phone.

Regarding claim 11, Bottoms and Jacobs as modified by Pardo and Tsai further shows determining the status of the phone and the status of the modem (by the use of control commands (see Pardo col. 7, lines 54-67).

Regarding claim 12, the combination of Bottoms, Jacobs, Pardo and Tsai shows the step of determining the status of the phone and modem further comprises the steps: of determining either a phone or the modem are not connected (see Pardo col. 7, lines 50-67), and Pardo further shows the capability of displaying on the telephone screen features such as dialing status, redialing status, receiving a call, caller log, etc., see Figs. 4-9), but the combination of Bottoms, Jacobs, Pardo and Tsai fail to teach displaying a message on the radio that the call cannot be completed, terminating the audio connection and waiting for a predetermined period of time before resuming the method at the step of verifying the availability of the phone.

However, since Bottoms shows disabling the voice encoder and voice decoder in the "data-only-mode" and since Pardo shows the capability of displaying dialing messages, it would have been obvious to one of ordinary skill in the art to provide for the display of any desired messages including the availability or unavailability of the phone for carrying out desired communications without wasting communication resources unnecessarily.

Regarding claim 13, the combination of Bottoms, Jacobs, Pardo and Tsai further discloses the step of determining the existence of a computer connection for the transfer of data between the PDA and the cellular phone (see Bottoms, data-only-cellular mode, col. 4, lines 14-23), Pardo further shows the capability of displaying on the telephone screen, features such as dialing status, redialing status, receiving a call, caller log, etc., see Figs. 4-9), but the combination of Bottoms, Jacobs, Pardo and Tsai fail to explicitly teach the step of displaying a message on the radio indicating the transfer of data is taking place.

However, since Pardo shows the capability of displaying dialing messages, it would have been obvious to one of ordinary skill in the art to provide for the display of any desired messages including the availability or unavailability of the phone for carrying out desired communications without wasting communication resources unnecessarily.

Regarding claims 14-16, Pardo further shows the use of control commands such as dial, pick up, hang up, get line status, get data (see Pardo col. 7, lines 50-67), and Pardo further shows the capability of displaying on the telephone screen features such as dialing status, redialing status, receiving a call, caller log, etc., see Figs. 4-9), but the combination of Bottoms, Jacobs, Pardo and Tsai fail to explicitly teach the step of monitoring for a loss of connection or a hang up signal from the personal digital assistant including the step of displaying a message on the radio that the call is complete or incomplete upon receipt of a hang up signal from the PDA as well as

determining that there is an absence of signal traffic for a predetermined period of time and terminating the audio channel connection.

However, since Bottoms shows disabling the voice encoder and voice decoder in the "data-only-mode" and since Pardo shows the capability of displaying dialing messages, it would have been obvious to one of ordinary skill in the art to provide for the display of any desired messages including the availability or unavailability of the phone for carrying out desired communications including terminating the audio channel connection when there is absence of signal traffic for a predetermined period of time without wasting communication resources unnecessarily in the combination of Bottoms, Jacobs, Pardo and Tsai.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kim (6,317,425) discloses a method for data synchronizing a radio multi-terminal communication system including a cellular telephone and a PDA. Boesen (6,542,721) discloses a combination cellular telephone, PDA and pager unit.

Response to Arguments

7. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Appiah whose telephone number is 703 305-4772. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 703 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CA
July 07, 2004

CHARLES APPIAH
PRIMARY EXAMINER